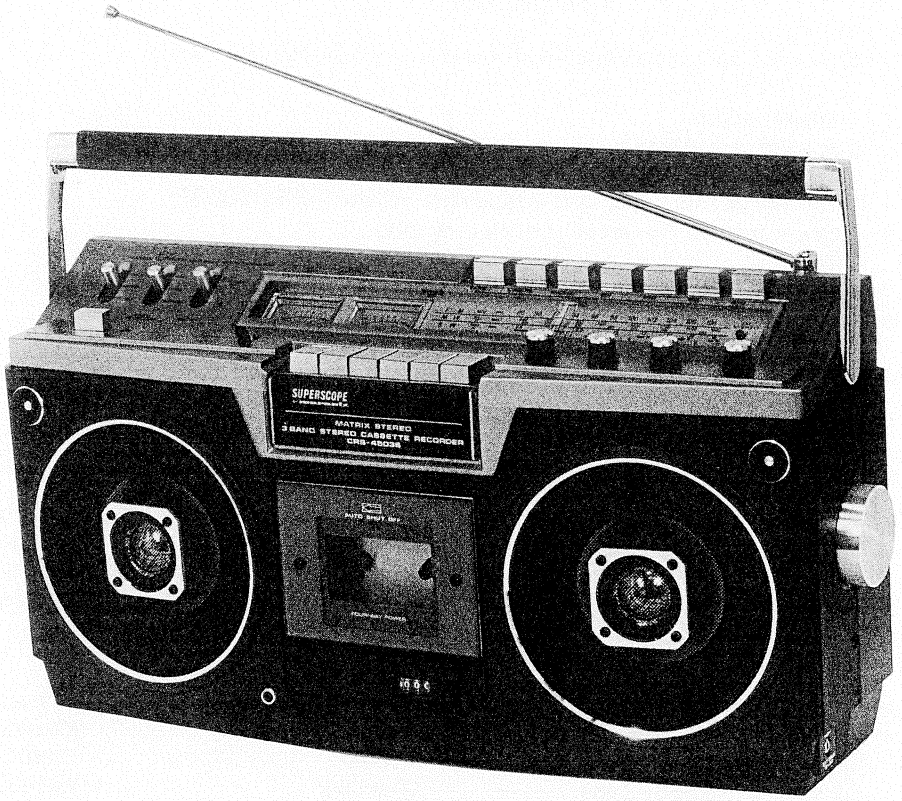
AC/DC PORTABLE
STEREO CASSETTE-RECORDER 3-BAND RADIO

MODEL CRS-4503S/L

SERVICE DATA

SEP./1979



SUPERSCOPE®
BY marantz®

SUPERSCOPE INC.
20525 NORDHOFF STREET CHATSWORTH,
CALIFORNIA 91311·U.S.A.

SUPERSCOPE DESIGN AND SERVICE

Using superior design and selected high grade components, SUPERSCOPE has created the ultimate in stereo sound. Only original SUPERSCOPE parts can insure that your SUPERSCOPE product will continue to perform to the specifications for which it is famous.

Parts for your SUPERSCOPE stereo are generally available within 72 hours throughout the nation via a toll-free line to our National Parts Depot in California. The sales professionals who take your call immediately refer to their own desk top computer terminal and can quickly determine the availability and price information you require. If, for some reason, your order should exceed our available stock, we usually can instantly provide an alternate replacement part or current delivery information. When the order is placed and confirmed, the computer simultaneously generates "hard copy" orders at the distribution center. As hard copies come directly from the computer to the national parts depot, your requested stock is assembled and prepared for shipment and placed on the first available carrier for delivery to you.

ORDERING PARTS

Phone orders will eliminate mail delays, and we encourage the use of this method. If you order by mail, use SUPERSCOPE parts order forms which are available from our National Parts Depot located at the following address:

SUPERSCOPE NATIONAL PARTS DEPARTMENT
20525 Nordhoff Street
Chatsworth, California 91311
Phone: 1-800-423-5108
1-213-998-9333

The following information must be supplied to eliminate delays in processing your order:

1. Complete address.
2. Complete part numbers.
3. Complete description of parts.
4. Model number for which part is required (indicate SUPERSCOPE).
5. Account number (for account customers only).

Direct consumers will be provided with the current retail price quotation on available parts in order to advise them of the cost of the parts and shipping.

OVERSEAS PARTS ORDERING

Parts may also be ordered from the following overseas addresses:

CANADA

Superscope Canada, Ltd.
3710 Nashua Drive
Mississauga
Ontario, Canada L4V1M5

AUSTRALIA

Superscope (Australasia) Pty., Ltd.
32 Cross Street (P.O. Box 604)
Brookvale 2100 N.S.W.
Australia

JAPAN

Marantz Japan, Inc.
3622 Kamitsuruma
Sagamihara Shi
Kanagawa, Japan

EUROPE

Superscope Europe, S.A.
Avenue Leopold III, 2
7120 Peronnes-Lez-Binche
Belgium

Marantz France
Rue Louis Armand 9
92600 Asnieres
Hauts-de-Seine
France

Marantz Audio U.K. Ltd.
London Road, 203
Staines
Middlesex
England

Superscope GmbH
Max-Planck-Strasse 22
D-6072 Dreieich 1
West Germany

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please contact the nearest facility for the necessary assistance.

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Model CRS-4503S/4503L is not different from Model CRS-4003S actually except for the following parts component, therefore please use service data of Model CRS-4003S together with following list for service of Model CRS-4503S/4503L.

N.B. notes on order placement of the service manuals
(1) Even if you order by P/N 202T855040 (Flysheet), we will not deliver the original service manuals.
(2) In case that you require a comprehensive service manual, please order by both P/N 4182855020 (Original) and P/N 202T855040 (Flysheet) simultaneously.

FTZ REGULATION

Instruction for the use in the range other than specified in FTZ codes.

Achtung für die Leute, die in dem Gebiet wohnen, wo die FTZ-Bestimmungen vorherrschend sind.

Sollte das Gerät auch für Frequenzen auszerhalb des in den FTZ-Bestimmungen angegebenen Bereiches empfangebereit sein, bitten wir, den Bereich durch Nachstellen des Kernes in der Oszillatorspule (in der Abbildung mit "FTZ" gekennzeichnet) so zu korrigieren, dass er den Bestimmungen entspricht.

CRS-4503S TECHNICAL SPECIFICATIONS

GENERAL

Dimensions . . . . . 481 mm x 248 mm x 150 mm (19" x 9-3/4" x 5-7/8")
Weight . . . . . 7.4 kg (16 lbs 5 oz) with Batteries
Power Requirements . . . (E) AC110 ~ 130V/220 ~ 240V 50/60 Hz, 25 Watts
(A) AC240V 50 Hz, 25 Watts
8"D" Size Batteries
2 RBD-1 Rechargeable Battery Packs
External 12 V DC

Semiconductor Complement
- Transistors 34
- FET's 2
- Diodes 31
- IC's 3

Terminals
- Microphone Input x 2 . . . . . Plug Type: Mini
  Input Sensitivity: less than 0.32 mV (–70 dBV)
  Input Impedance: 5.2 kΩ
- Line Input x 2 . . . . . Plug Type: Pin
  Input Sensitivity: less than 100 mV (–20 dBV)
  Input Impedance: 100 kΩ
- Line Output x 2 . . . . . Plug Type: Pin
  Output Level: 0.775 V (0 VU) ±3 dB
  Output Impedance: 7 kΩ
- External Speaker x 2 . . . . . Plug Type: Mini
  Output Power 3.0 Watts x 2
  (4Ω, better than EIA DC)
- Phono Input x 2 . . . . . Plug Type: Pin
  Input Sensitivity: less than 5 mV (-46 dBV)
  Input Impedance: 25 kΩ
- FM External Antenna x 1 . . . . Input Impedance: 75 Ω
- Stereo Headphone x 1 . . . . . Plug Type: Phone
  Inpedance: 8 Ω
- AC Inlet x 1
- DC 12 V x 1
- Remote Control x 1

TAPE RECORDER SECTION

Type . . . . . Philips Type Cassette Tape
Recording System . . . . . 4-Track System, AC Bias
Erasing System . . . . . AC Erase
Rewind and Fast Forward Time 90 sec./C-60
Power Output . . . . . 3.0 W x 2 (DC)
R/P Frequency Response
- Normal . . . . . 60 Hz +4, –8 dB/8 kHz +5, –5 dB
- CrO_2/F2-Cr . . . . . 60 Hz +3, –10 dB/8 kHz +5, –6 dB

Signal-to-Noise Ratio . . . . . 45 dB
Tape Speed . . . . . 1-7/8 ips. (4.8 cm/sec.) ±3%
Wow and Flutter . . . . . less than 0.25% rms (NAB WTD)

TUNER SECTION

Circuit System . . . 3-Band FM/MW/SW, Superheaterodyne
Frequency Range . . . . . FM: 88 to 108 MHz
MW: 525 to 1605 kHz
SW: 6 to 18 MHz
Intermediate Frequency . . . . . FM: 10.7 MHz
MW/SW: 455 kHz
Antenna . . . . . FM: Telescopic Monopole
MW/SW: Ferrite Bar
Sensitivity . . . . . FM: less than 7 μV (30 dB S/N)
MW: less than 500 μV/m (20 dB S/N)
Signal-to-Noise Ratio . . . . . FM: better than 54 dB (1 mV Input)
MW: better than 42 dB (5 mV/m Input)
FM Stereo Separation . . . better than 28 dB (1 mV Input)

CRS-4503L TECHNICAL SPECIFICATIONS

GENERAL

Dimensions . . . . . 481 mm x 248 mm x 150 mm (19" x 9-3/4" x 5-7/8")
Weight . . . . . 7.4 kg (16 lbs 5 oz) with Batteries
Power Requirements . . . . . AC 110/220
50 Hz, 25 Watts
8 "D" Size Batteries
2 RBD-1 Rechargeable Battery Packs
External 12 V DC

Semiconductor Complement
- Transistors 34
- FET's 2
- Diodes 31
- IC's 3

Terminals
- Microphone Input x 2 . . . . . Plug Type: Mini
  Input Sensitivity: less than 0.32 mV (–70 dBV)
  Input Impedance: 5.2 kΩ
- Line Input x 2 . . . . . Plug Type: Pin
  Input Sensitivity; less than 100 mV (–20 dBV)
  Input Impedance: 100 kΩ
- Line Output x 2 . . . . . Plug Type: Pin
  Output Level: 0.775 V (0 VU) ±3 dB
  Output Impedance: 7 kΩ
- External Speaker x 2 . . . . . Plug Type: Mini
  Output Power: 3.0 Watts x 2
  (4Ω, better than EIA DC)
- Phono Input x 2 . . . . . Plug Type: Pin
  Input Sensitivity: less than 5 mV (–46 dBV)
  Input Impedance: 25 kΩ
- FM External Antenna x 1 . . . . Input Impedance: 75 Ω
- Stereo Headphone x 1 . . . . . Plug Type: Phone
  Impedance: 8 Ω
- AC Inlet x 1
- DC 12 V x 1
- Remote Control x 1

TAPE RECORDER SECTION

Tape . . . . . Philips Type Cassette Tape
Recording System . . . . . 4-Track System, AC Bias
Erasing System . . . . . AC Erase
Rewind and Fast Forward Time 90 sec./C-60
Power Output . . . . . 3.0 W x 2 (DC)
R/P Frequency Response
- Normal . . . . . 60 Hz +4, –8 dB/8 kHz +5, –5 dB
- CrO_2/Fe-Cr . . . . . 60 Hz +3, –10 dB/8 kHz +5, –6 dB

Signal-to-Noise Ratio . . . . . 45 dB
Tape Speed . . . . . 1-7/8 ips. (4.8 cm/sec.) ±3%
Wow and Flutter . . . . . less than 0.35% rms (DIN WTD)

TUNER SECTION

Circuit System . . . 3-Band FM/MW/LW, Superheterodyne
Frequency Range . . . . . FM: 88 to 108 MHz
MW: 525 to 1605 kHz
LW: 150 to 370 kHz
Intermediate Frequency . . . . . FM: 10.7 MHz
MW/LW: 455 kHz
Antenna . . . . . FM: Telescopic Monopole
MW/LW: Ferrite Bar
Sensitivity . . . . . FM: less than 7 μV (30 dB S/N)
MW: less than 700 μV/m (20 dB S/N)
Signal-to-Noise Ratio . . . . . FM: better than 54 dB (1 mV Input)
MW: better tahn 38dB (5 mV/m Input)
FM Stereo Separation . . . better than 28 dB (1 mV Input)

CRS-4503S/L ALIGNMENT PROCEDURES

MW ALIGNMENT PROCEDURES

(FUNCTION switch in "MW".)

Step	Connect Signal Generator to:	Set Signal Frequency to:	Set Tuning Dial to:	Indicator Connection	Adjust:	Procedure
1	J135	455 kHz with ±35 kHz sweep.	–	Oscilloscope vertical connector to TP-6 thru diode.	L109, L115, and L116.	Adjust inductors for highest and symmetric curve.
2	Indirect coupling near set antenna coil.	515 kHz with modulation.	515 kHz (max. capacitance).	VTVM to LINE OUT.	L114 (OSC coil).	Adjust for max. output.
3		1650 kHz with modulation.	1650 kHz (min. capacitance).		C159 (trimmer).	
4	Repeat Steps 2 and 3.					
5	Indirect coupling near set antenna coil.	600 kHz with modulation.	600 kHz.	VTVM to LINE OUT.	L112 (antenna coil).	Adjust for max. output.
6		1400 kHz with modulation.	1400 kHz.		CT-4 (trimmer).	
7	Repeat Steps 5 and 6.					

Note:
1. In adjustment, connect the signal generator grounding terminal (—) to that of the set.
2. Modulate the signal generator to 30% with a 400 Hz signal.
3. Reduce the signal generator as low as possible.
4. Set the VOLUME control for the maximum level.

LW ALIGNMENT PROCEDURES

(FUNCTION switch in "LW")

Step	Connect Signal Generator to:	Set Signal Frequency to:	Set Tuning Dial to:	Indicator Connection	Adjust:	Procedure
1	Indirect coupling near set antenna coil.	145KHz with modulation.	145KHz (max. capacitance).	VTVM to LINE OUT.	L113 (OSC coil).	Adjust for max. output.
2		380KHz with modulation.	380KHz (min. capacitance).		C158 (trimmer).	
3		Repeat Steps 1 and 2.				
4		170KHz with modulation	170KHz	VTVM to LINE OUT.	L112 (antenna coil).	Adjust for max. output
5		320KHz with modulation	320KHz		CT-1 (trimmer).	
6	Repeat Steps 4 and 5.					

Note:
1. In adjustment, connect the signal generator grounding terminal (—) to that of the set.
2. Modulate the signal generator to 30% with a 400 Hz signal.
3. Reduce the signal generator as low as possible.
4. Set the VOLUME control for the maximum level.

***For the adjustment of the CRS-4503S SW, refer to Service Data of the CRS-4003S.**

FM ALIGNMENT PROCEDURE

(FUNCTION switch in "FM" and MODE switch in "MONO".)

Step	Connect Signal Generator to:	Set Signal Frequency to:	Set Tuning Dial to:	Indicator Connection	Adjust:	Procedure
1	TP-1. (J109)	10.7 MHz sweep.		Oscilloscope vertical connector to TP-4 thru diode (J113)	L104, L108, and L110.	Adjust inductor for highest and symmetric curve.
2				Oscilloscope vertical connector to TP-2 thru diode. (J114)	L111.	Adjust inductor for symmetric curve around 10.7 MHz.
3	TP-7. (J001)	87 MHz with modulation.	87 MHz (max. capacitance).	VTVM to LINE OUT.	L106 (OSC coil).	Adjust for max. output.
4		109 MHz with modulation.	109 MHz (min. capacitance).		CT-2 (trimmer).	
5	Repeat Steps 3 and 4.					
6	TP-7. (J001)	90 MHz with modulation.	90 MHz.	VTVM to LINE OUT.	L102.	Adjust for max. output.
7		106 MHz with modulation.	106 MHz.		CT-3 (trimmer).	
8	Repeat Steps 6 and 7.					

NOTE:
1. In adjustment, connect the signal generator grounding terminal (—) to that of the set.
2. Modulate the signal generator to 30% with a 400 Hz signal.
3. Reduce the signal generator as low as possible.
4. Set the VOLUME control for the maximum level.

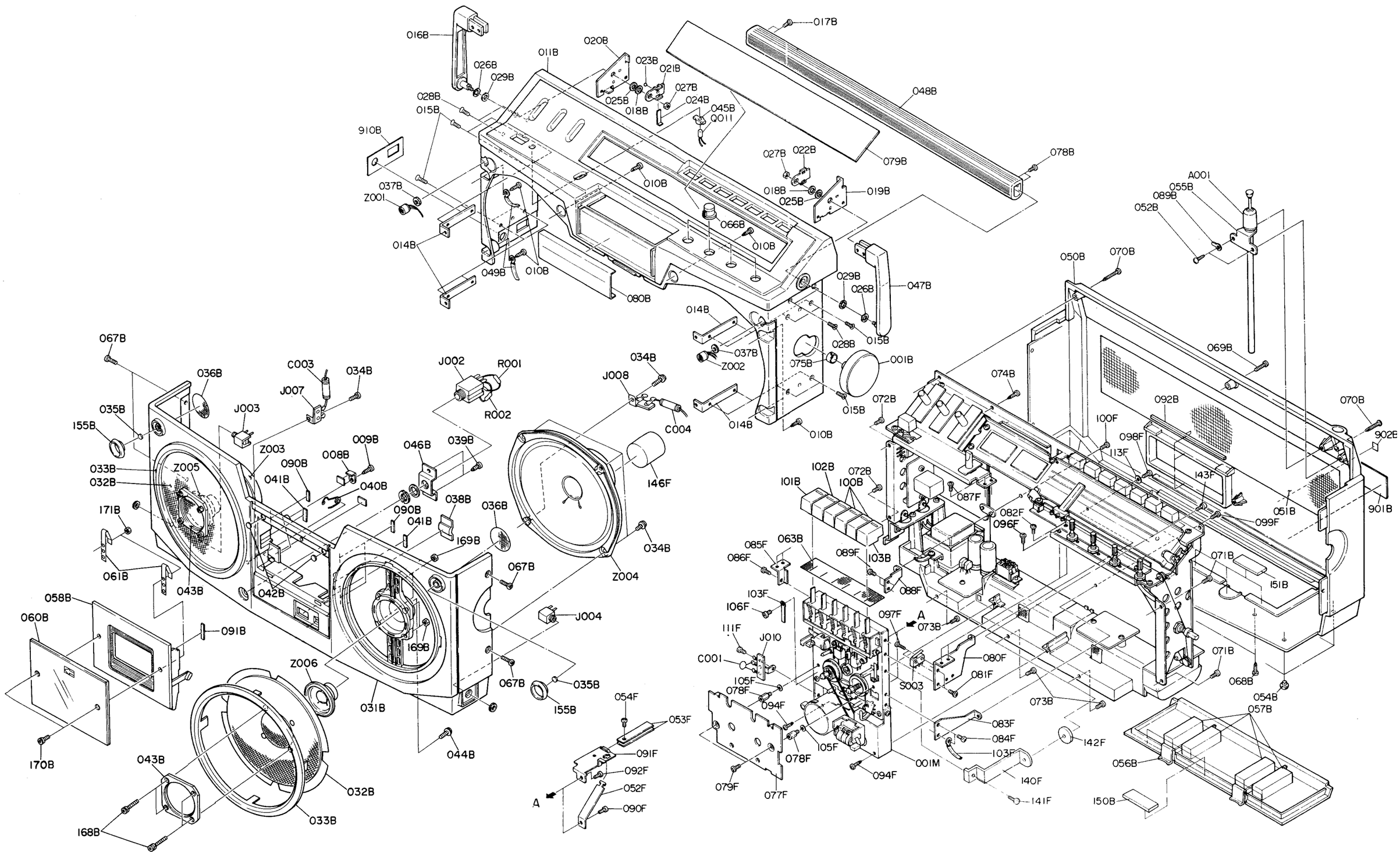
FM STEREO SEPARATION ALIGNMENT PROCEDURE

(FUNCTION switch in "FM" and MODE switch in "STEREO".)

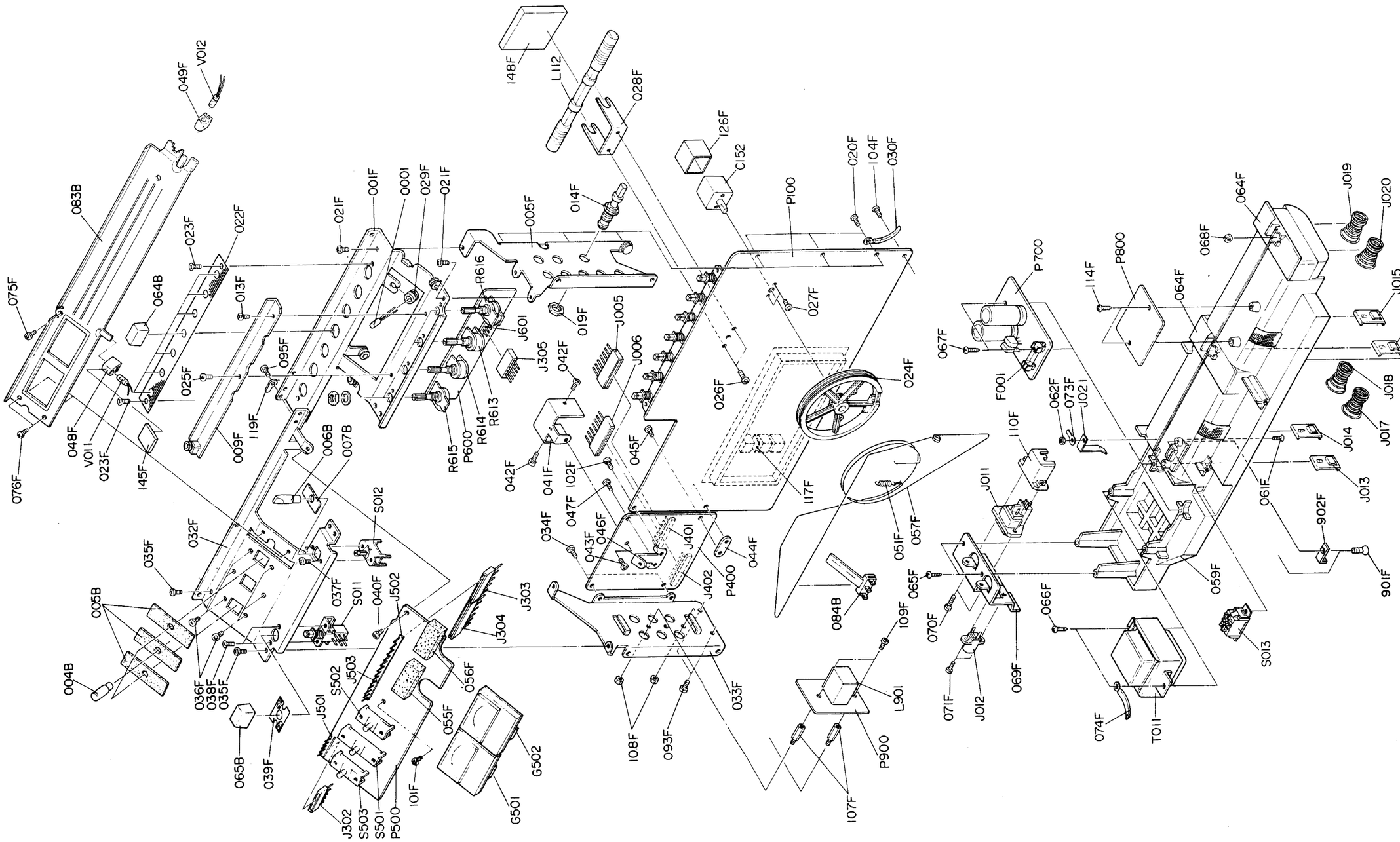
Step	Connect Signal Generator to:	Set Signal Frequency to:	Set Tuning Dial to:	Indicator Connection	Adjust:	Procedure
1	98 MHz to TP-7. (J001)	Pilot (19 kHz).	98 MHz.	VTVM or oscilloscope to TP-3. (J127)	L117.	Adjust inductor for max. output.
2		STEREO SSG SUB Signal.		VTVM to LINE OUTPUT jack.	L118.	Adjust inductor for max. output or least distortion.
3		L channel			R-174.	Adjust semifixed resistor for min. output in R channel.
4		R channel				Adjust semifixed resistor for min. output in L channel.
5	Repeat Steps 3 and 4.					

EXPLODED VIEWS

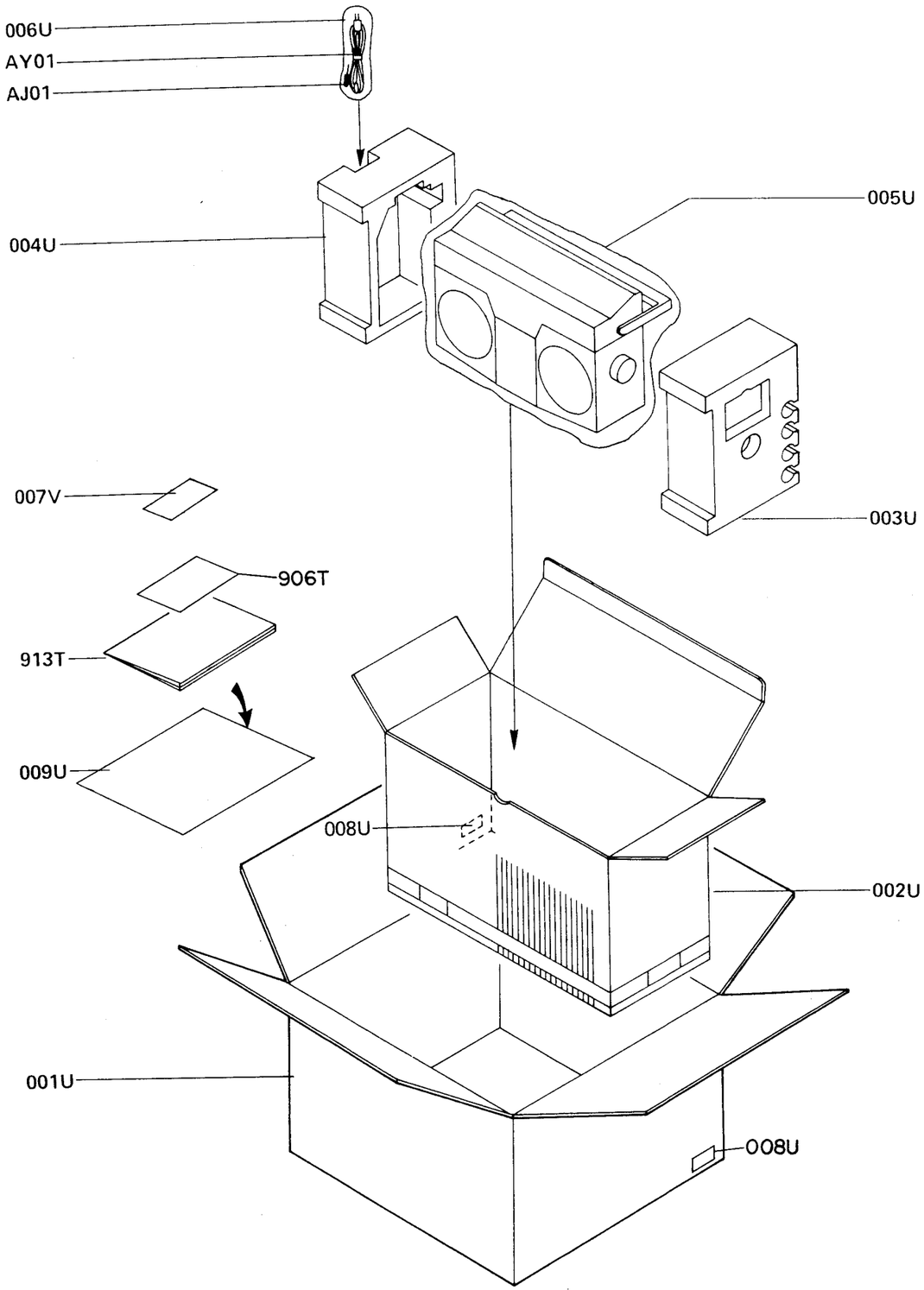
CABINET EXPLODED VIEW



TUNER ASSEMBLY EXPLODED VIEW



PACKING MATERIAL EXPLODED VIEW



PARTS LIST

	CRS-4003S			CRS-4503S (N only)	CRS-4503L (E, A only)	
REF. DESIG.	Q'TY	PART NO.	Q'TY	PART NO.	PART NO.	DESCRIPTION
*	1	4182064400	1	203T064400	202T064400	Case Assembly, for E
*			1		202T064410	Case Assembly, for A
*	1	4182064410				Case Assembly
A	1	4182064420	1	203T064410	202T064420	Case Assembly, upper for E
A1			1		202T064430	Case Assembly, upper for A
B	1	4123064430	1	4270064430	4270064430	Case Assembly, Front
C	1	4123064490	1	4123064490	4123064490	Case Assembly
D	1	4182257400	1	203T257400	202T257400	Lid Assembly, Rear for E
	1		1		202T257410	Lid Assembly, Rear for A
E	1	4123257410	1	4123257430	4123257430	Lid Assembly, Battery
F	1	4183064440				
G	1	4123064450	1	4123064450	4123064450	Case Assembly, Battery
P050	1	ZZ41828220				
P100	1	ZZ41821210	1	ZZ41238210	ZZ41821210	P.W. Board Assembly, Pre-Amp
P400	1	ZZ41230040	1	ZZ41238040	ZZ41230040	P.W. Board Assembly, Power
P500	1	ZZ41230050	1	ZZ41238050	ZZ41238050	P.W. Board Assembly, Meter
P600	1	ZZ41830060	1	ZZ41830060	ZZ41830060	P.W. Board Assembly, Tone
P700	1	ZZ41230070	1	ZZ41230070	ZZ41230070	P.W. Board Assembly, Power Supply
P800	1	ZZ41230080	1	ZZ41230070	ZZ41230080	P.W. Board Assembly, Phono
P900	1	ZZ41230090	1	ZZ41230090	ZZ41230090	P.W. Board Assembly, Noise Blanker
001B	1	4136154503	1	4123154510	4123154510	Knob, Tuning
004B	3	4123154010	3	4123154060	4123154060	Knob, Selector
011B	1	4183064030	1	4183064070	4183064070	Case, Top
028B	4	54040303A9	4	51040306A9	51040306A9	F.H.M. Screw
031B	1	4123064023	1		4123064060	Case, Front
032B	2	4123202012	2	4251202010	4251202010	Net, Speaker
043B	2	4123353020	2	4251063042	4251063042	Escutcheon, Tweeter
050B	1	4123257030	1		4123257060	Lid, Rear
058B	1	4183064514	1	4220064024	4220064024	Case, Cassette
060B			1	4270063020	4270063020	Escutcheon, Cassette
062B	1	4136270012				Button, Mech.
064B	7	4123270032	7	4220270052	4220270052	Button, Selector
065B	1	4123270042	1	4220270052	4220270052	Button, Power
066B	4	4123154033	4	4123154050	4123154050	Knob, Vol.
071B	2	51590306B0	2	51100306A0	51100306A0	B.H.M. Screw
072B	2	51590306B0	2	51100306A0	51100306A0	B.H.M. Screw
079B	1	4123158012	1	4123158060	4123158060	Window, Top
080B	1	4182063014	1	203T064010	202T064010	Escutcheon, Top
083B	1	4182302010	1	203T302010	202T302010	Dial
084B	1	4123103012	1	4123103020	4123103020	Pointer
100B			3	4220270012	4220270012	Button, Play/FF/Rew
101B			1	4220270022	4220270022	Button, Pause
102B	1		1	4220270032	4220270032	Button, Stop/Eject
103B	1		1	4220270042	4220270042	Button, Rec
155B	1		1	4220353020	4220353020	Ring, ECM

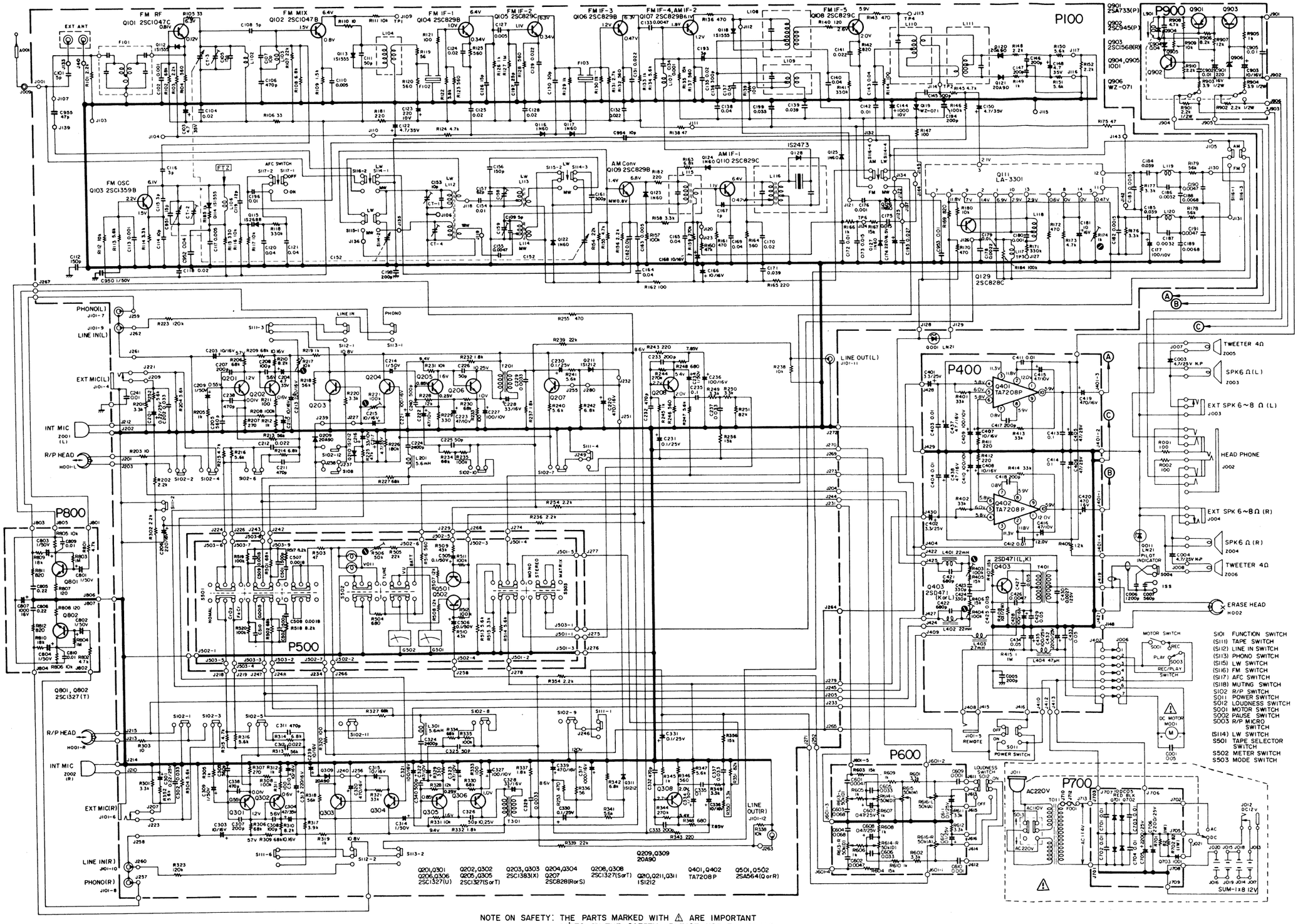
REF. DESIG.	CRS-4003S Q'TY	CRS-4003S PART NO.	CRS-4503S (N only) Q'TY	CRS-4503S (N only) PART NO.	CRS-4503L (E, A only) PART NO.	DESCRIPTION
Z005	1	QK00403010	1	QK00403030	QK00403030	Speaker, Tweeter
Z006	1	QK00403010	1	QK00403030	QK00403030	Speaker, Tweeter
C101	1	DD12100010	1	DD11050010	DD11050010	Ceramic 5pF
C102	1	DK17102010	1	DK16102030	DK16102030	Ceramic 0.001μF
C106	1	DD16501010	1	DD15471370	DD15471370	Ceramic 470pF
C109	1	DK18203030	1	DD10050370		Ceramic 0.02μF
C112	1	DD16151010	1	DD15151370	DD15151370	Ceramic 150pF
C114	1	DD15400040	1	DD12100060	DD12100060	Ceramic 10pF
C118	1	DK18203030	1	DK18223310	DK18223300	Ceramic 0.02μF
C119	1	DD16150030	1	DD16120030	DD16120030	Ceramic 12pF
C120	1	DK18403020	1	DK18403320	DK18403320	Ceramic 0.04μF
C124	1	DK18203030	1	DK18223310	DK18223300	Ceramic 0.02μF
C125	1	DK18203030	1	DK18223310	DK18223300	Ceramic 0.02μF
C128	1	DK18203030	1	DK18223310	DK18223310	Ceramic 0.02μF
C129	1	DK18203030	1	DK18223310	Dk18223310	Ceramic 0.02μF
C130	1	DD16300010	1	DD15300300	DD15300300	Ceramic 30pF
C131	1	DK18203030	1	DK18223310	DK18223310	Ceramic 0.02μF
C133	1	DK17502010	1	DK16472300	DK16472300	Ceramic 0.0047μF
C135	1	DK18203030	1	DK18223310	DK18223310	Ceramic 0.02μF
C136	1	DD15301020	1	DK15301360	DK15301360	Ceramic 300pF
C137	1	DK18403020	1	DK18403320	DK18403320	Ceramic 0.04μF
C139	1	DF17403020	1	DF16393300	DF16393300	Film 0.039μF
C140	1	DK18403020	1	DK18403320	DK18403320	Ceramic 0.04μF
C141	1	DK18403020	1	DK17223010	DK17223010	Ceramic 0.022μF
C142	1	DK18103020	1	DK18103310	DK18103310	Ceramic 0.01μF
C143	1	DK18403020	1	DK18403320	DK18403320	Ceramic 0.04μF
C145	1	DD15301020	1	DD15301360	DD15301360	Ceramic 300pF
C147	1	DD16201010	1	DD15221370	DD15221370	Ceramic 200pF
C160	1	DF17562010	1		DF16562300	Film 0.0056μF
C164	1	DK18403020	1	DK18403320	DK18403320	Ceramic 0.04μF
C165	1	DK18403020	1	DK18403320	DK18403320	Ceramic 0.04μF
C167	1	DD11020010	1	DD10010030	DD10010030	Ceramic 1pF
C168	1	EA33601090	1	EA10601690	EA10601690	Elect. 10μF 16V
C170	1	DK18203030	1	DK18223310	DK18223310	Ceramic 0.02μF
C171	1	DF17403010	1	DF16393300	DF16393300	Film 0.039μF
C175	1	DF17223010	1	DF16153300	DF16153300	Film 0.015μF
C178	1	DF16152010	1	DF16222010	DF16222010	Film 0.0022μF
C179	1	DF16103010	1	DF55103090	DF55103090	Film 0.01μF
C184	1	EM10402510	1	DF15393010	DF15393010	Film 0.039μF
C185	1	EM10402510	1	DF15393010	DF15393010	Film 0.039μF
C190	1	DF16822010	1	DF16472010	DF16472010	Film 0.0047μF
C191	1	DF16822010	1	DF16472010	DF16472010	Film 0.0047μF
C194	1	DD16501010	1	DD16201010	DD16201010	Ceramic 200pF
C199			1	DF17333010	DF17333010	Film 0.033μF
C951			1	DD15120370	DD15120370	Ceramic 12pF
C952			1	DK18403020	DK18403020	Ceramic 0.04μF
C953			1	DK18103010	DK18103010	Ceramic 0.01μF
C954			1	DD12100010	DD12100010	Ceramic 10pF
C955			1	DD17470010	DD17470010	Ceramic 47pF
R119	1	GD05680140	1	GD05560140	GD05560140	Resistor 56Ω
R122	1	GD05332140	1	GD05392140	GD05392140	Resistor 3.9kΩ
R130	1	GD05561140	1	GD05102140	GD05102140	Resistor 1kΩ
R140	1	GD05101140	1	GD05121140	GD05121140	Resistor 120Ω
R148	1	GD05102140	1	GD05222140	GD05222140	Resistor 2.2kΩ
R149	1	GD05152140	1	GD05102140	GD05102140	Resistor 1kΩ
R154	1	GD05153140	1	GD05223140	GD05223140	Resistor 22kΩ
R160	1	GD05393140	1	GD05473140	GD05473140	Resistor 47kΩ
R167	1	GD05822140	1	GD05153140	GD05153140	Resistor 15kΩ
R178	1	GD05333140	1	GD05563140	GD05563140	Resistor 56kΩ

REF. DESIG.	CRS-4003S Q'TY	CRS-4003S PART NO.	CRS-4503S (N only) Q'TY	CRS-4503S (N only) PART NO.	CRS-4503L (E, A only) PART NO.	DESCRIPTION
168B			8	5273031589	5273031589	H.S Head Bolt, Tweeter
169B			8	53110303A9	53110303A9	Hexagon Nut, Tweeter
170B			2	5273030859	5273030859	H.S Head Bolt Cassette
171B			2	53110303A9	53110303A9	Hexagon Nut
086B	1	51280308B0				
087B	2	51100308S9				
088B	1	4182265030				
901B		4182265020	1	203T265010	202T265010	Indicator, Name
901B	1		1		202T265020	Indicator, Name
910B	1		1		4182265080	Indicator, Power 240V
076B	1	4183265050	1			Indicator, EXT. SPK
077B	1	4183265060	1			Indicator, EXT. SPK
053F	1	4123104020	1	4123115010	4123115010	Spring
055B	1	5123104020	1	4123104020	4123104020	Retainer
058F	1	4170053020				Cover
115F	2	51040312A9	2	51100312A9		F.H.M. Screw
116F	1	4174265020	1			Indicator, Selector Power
146F	1	4123056030	1		4183056020	Buffer
147F		4123056040				
149F	2		2		3435056040	Buffer
150F	1		1		62030039W0	Lug
151F			3		5903080590	Washer
901F			2		51040312A9	F.H.M. Screw
902F			1		4174256020	Indicator, Selector Power
902F	1		1		4170053020	Cover, Battery Case
902F	1		1	203T114010		Retainer
902F			1		4174265022	Indicator, Selector Power
913T	1	4182851314	1	202T851310	202T851310	Instructions
914T	1	3906854023				Gurantee Card
915T	1	2876851030				Instruction
916T	1	9630000170				Gurantee Card
906T					3369851330	Instructions
001U	1	4182805010	1	203T805010	202T805010	Master Carton
002U	1	4182801010	1	203T801010	202T801010	Packing Case
088U	2	9522815010	2	9526019010	9526019010	Serinal No. Card
C003	1	ER40502510	1	EQ47502510	EQ47502510	Elect. 4.7μF 25V
C004	1	ER40502510	1	EQ47502510	EQ47502510	Elect. 4.7μF 25V
C005			1	DD16201010	DD16201010	Ceramic 200pF 50V
F001	1	FS10150030	1	FS10160800	FS10160800	Fuse 1.6A
J007	1	YL01030150				Terminal
J008	1	YL01030150				Terminal
J050	1	YL11000170				DIN Jack
J051	1	YP06000580				
J052	1	YJ06001050				
R051	1	GD05273140				Resistor 27kΩ
R052	1	GD05273140				Resistor 27kΩ
R053	1	GD05333140				Resistor 33kΩ
R054	1	GD05333140				Resistor 33kΩ
R055	1	GD05103140				Resistor 10kΩ
R056	1	GD05103140				Resistor 10kΩ
T011	1	TS15404030	1	TS15404050	TS15404040	Power Transformer
Z003	1	QK01603012	1	QK01603050	QK01603050	Speaker 4Ω
Z004	1	QK01603012	1	QK01603050	QK01603050	Speaker 4Ω

REF. DESIG.	CRS-4003S Q'TY	CRS-4003S PART NO.	Q'TY	CRS-4503S (N only) PART NO.	CRS-4503L (E, A only) PART NO.	DESCRIPTION
R179	1	GD05333140	1	GD05563140	GD05563140	Resistor 56kΩ
R183			1		GD05223140	Resistor 22kΩ
R184			1	GD05104140	GD05104140	Resistor 100kΩ
R185			1	GD05102140	GD05102140	Resistor 1kΩ
C211	1	DD16501010	1	DD15471370	DD15471370	Ceramic 470pF
C218	1	DF16122010				Film 1200pF
C232	1	DD16501010	1	DD15471370	DD15471370	Ceramic 470pF
C234	1	EA10505090	1	EE10505010	EE10505010	Elect. 1μF 50V
C235	1	DF16563010	1	DF17104010	DF17104010	Film 0.1μF
C238	1	DD16501010	1	DD15471370	DD15471370	Ceramic 470pF
Q209	1	HD20002060	1	HD10003020	HD10003020	Diode, 20A90
R213	1	GD05823140	1	GD05563140	GD05563140	Resistor 56kΩ
R216	1	GD05822140	1	GD05562140	GD05562140	Resistor 5.6kΩ
R221	1	RA05030060	1	RA01040160	RA01040160	Resistor 100kΩ
R227	1	GD05393140	1	GD05683140	GD05683140	Resistor 68kΩ
R236	1	GD05222140	1	GD05222140	GD05222140	Resistor 2.2kΩ
R239	1	GD05183140	1	GD05223140	GD05223140	Resistor 2.2kΩ
R255			1	GD05471140	GD05471140	Resistor 470Ω
R256			1	GD05471140	GD05471140	Resistor 470Ω
C311	1	DD16501010	1	DD15471370	DD15471370	Ceramic 470pF
C318	1	DF16122010				Film 1200pF
C332	1	DD16501010	1	DD15471370	DD15471370	Ceramic 470pF
C334	1	EA10505090	1	EE10505010	EE10505010	Elect. 1μF 50V
C335	1	DF16563010	1	DF17104010	DF17104010	Film 0.1μF
C338	1	DD16501010	1	DD15471370	DD15471370	Ceramic 470pF
Q309	1	HD20002060	1	HD10003020	HD10003020	Diode, 20A90
R313	1	GD05823140	1	GD05563140	GD05563140	Resistor 56kΩ
R316	1	GD05822140	1	GD05562140	GD05562140	Resistor 5.6kΩ
R327	1	GD05393140	1	GD05683140	GD05683140	Resistor 68kΩ
R339	1	GD05183140	1	GD05223140	GD05223140	Resistor 22kΩ
C413	1	DF16683010	1	DF17104010	DF17104010	Film 0.1μF
C414	1	DF16683010	1	DF17104010	DF17104010	Film 0.1μF
C421			1	EA47701690	EA47701690	Elect. 470μF 16V
C421			1	DF66181500	DF66181500	Film 180pF
C427	1	DF16103010	1	DF16333010	DF16333010	Film 0.033μF
C430	1	DF16152510	1	DF16102510	DF16102510	Film 1000pF
R415	1	GJ05010110	1	GJ05010010	GJ05010010	Resistor 1Ω
C501	1	DF65301010	1	DF16152010	DF16152010	Film 0.0015μF
C502	1	DF65301010	1	DF16152010	DF16152010	Film 0.0015μF
C507			1	DF16182010	DF16182010	Film 0.0018μF
C508			1	DF16182010	DF16182010	Film 0.0018μF
C509			1	DF16152010	DF16152010	Film 0.0015μF
C510			1	DF16152010	DF16152010	Film 0.0015μF
R615	1	RM05030180	1	RK05030180	RK05030180	Resistor 50kΩ
C801	1	EA10601690	1	EA10505090	EA10505090	Elect 1μF 50V
C802	1	EA10601690	1	EA10505090	EA10505090	Elect 1μF 50V
C805	1	EM10402510	1	DF16224010	DF16224010	Film 0.22μF
C806	1	EM10402510	1	DF16224010	DF16224010	Film 0.22μF
C809	1		1	DF16103010	DF16103010	Film 0.01μF
C810	1		1	DF16103010	DF16103010	Film 0.01μF

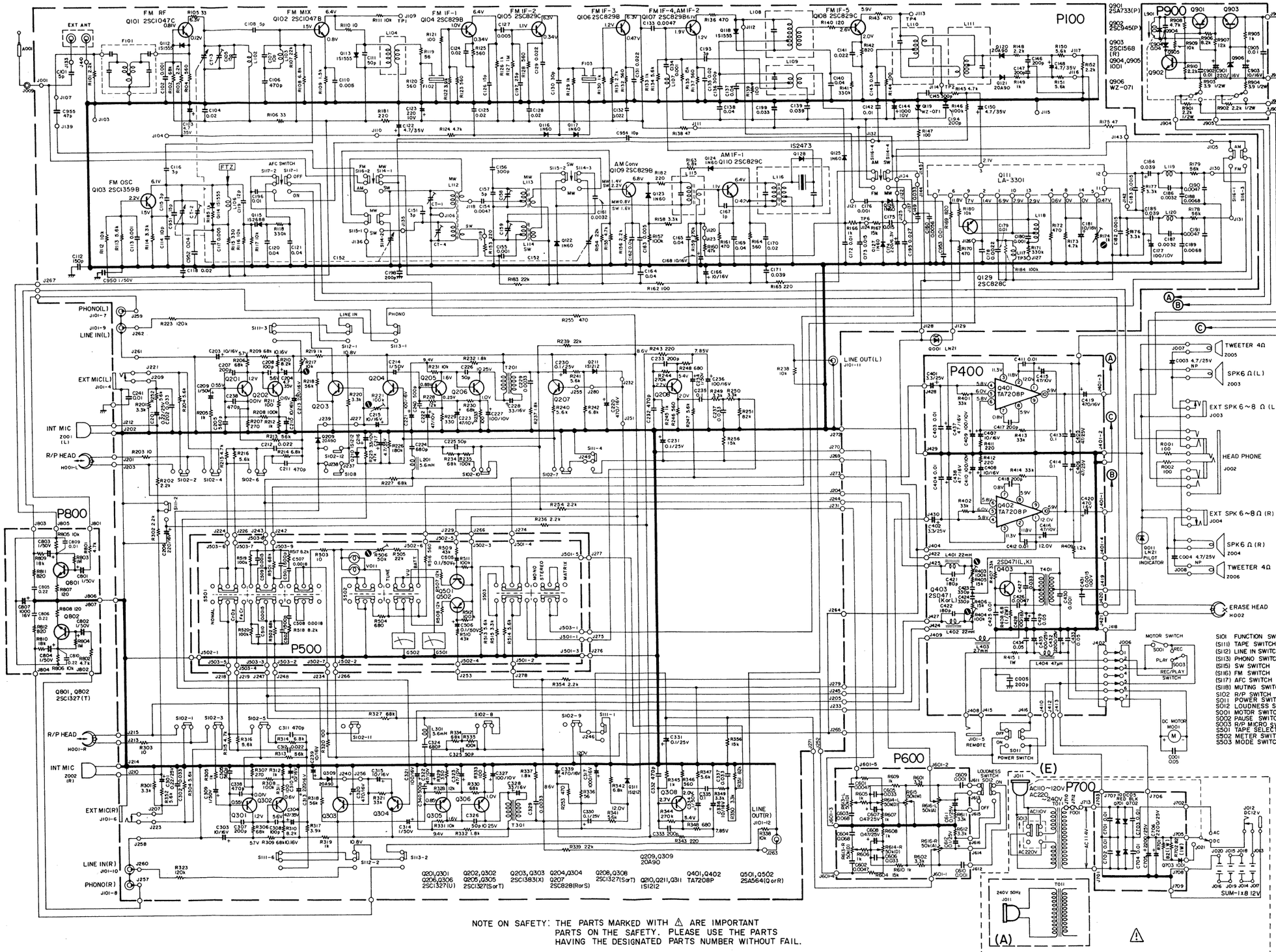
	CRS-4003S			CRS-4503S (N only)	CRS-4503L (E, A only)	
REF. DESIG.	Q'TY	PART NO.	Q'TY	PART NO.	PART NO.	DESCRIPTION
R803	1	GD05104140	1	GD05105140	GD05105140	Resistor 1MΩ
R804	1	GD05104140	1	GD05105140	GD05105140	Resistor 1MΩ
R805	1	GD05472140	1	GD05103140	GD05103140	Resistor 10kΩ
R806	1	GD05472140	1	GD05103140	GD05103140	Resistor 10kΩ
C905			1	DK17103010	Dk17103010	Ceramic 0.01μF
Q903	1	HT31317190	1	HT315681R0	HT315681R0	Transistor 2SC568
ZB01	8	ZB02010070				Battery
AY01					ZC02006020	A.C Cord
P050		YK41231220 ZZ41828220				
C153			1	DD12100010		Ceramic 10pF
C154			1	DF16103010		Film 0.01μF
C155			1	DF16472010		Film 0.0047μF
C156			1	DF55151090		Film 150pF
C157			1	DD15620300		Ceramic 62pF
C161			1	DF55301090		Film 300pF
C950			1	EA10505090		Elect. 1μF 50V
L112	1	LF11400880	1	LF11400814		Ant. coil, LW-MW
L113	1	Lφ71010010	1	Lφ70030082		Osc coil, LW
L114	1	Lφ71010042	1	Lφ71010010		Osc coil, MW
R153	1	GD05221140				Resistor 220Ω

SCHEMATIC DIAGRAM (CRS-4503S)



NOTE ON SAFETY: THE PARTS MARKED WITH ⚠ ARE IMPORTANT PARTS ON THE SAFETY. PLEASE USE THE PARTS HAVING THE DESIGNATED PARTS NUMBER WITHOUT FAIL.

SCHEMATIC DIAGRAM (CRS-4503S)



S101 FUNCTION SWITCH
(S111) TAPE SWITCH
(S112) LINE IN SWITCH
(S113) PHONO SWITCH (S114) SW SWITCH
(S115) SW SWITCH
(S116) FM SWITCH
(S117) AFC SWITCH
(S118) MUTING SWITCH
S102 R/P SWITCH
S011 POWER SWITCH
S012 LOUDNESS SWITCH
S001 MOTOR SWITCH
S002 PAUSE SWITCH
S003 R/P MICRO SWITCH
S501 TAPE SELECTOR SWITCH
S502 METER SWITCH
S503 MODE SWITCH

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